UNITED STATES PATENT AND TRADEMARK OFFICE

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EXAMINER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)
Office Action Summary	10/579,575	LESCUYER ET AL.
	Examiner	Art Unit
	Kyung Hye Shin	2443

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *24 August 2009*.
2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-19* is/are pending in the application.
     4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) *1-19* is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☒ The drawing(s) filed on *24 August 2009* is/are: a)☒ accepted or b)☐ objected to by the Examiner.
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
     a)☒ All   b)☐ Some * c)☐ None of:
         1.☒ Certified copies of the priority documents have been received.
         2.☐ Certified copies of the priority documents have been received in Application No. _____.
         3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
     * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☐ Information Disclosure Statement(s) (PTO/SB/08)
     Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
     Paper No(s)/Mail Date. _____.
5)☐ Notice of Informal Patent Application
6)☐ Other: _____.

DETAILED ACTION

1.   Claims **1 - 19** are pending. Claims **1, 11** are independent.   This application was

filed on 8-24-2009.

Claim Rejections - 35 USC § 101

2.   35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of
> matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the
> conditions and requirements of this title.

3.   Claims **1 -10, 18, 19** are rejected under 35 USC 101 since the claims are

directed to non-statutory subject matter.

Claims **1 - 10** are to be construed as a module of *"software per se"*, unless the

specification makes clear the only reasonable interpretation of the word *"module"* is

limited to hardware inclusive tangible embodiments. The specification on page 1

discloses that the module is comprised of software: "This system is frequently

implemented within a software module that cooperates with the controller of packet

transmission and receipt."

Claims **18, 19** recite storage media which appear to cover both transitory and

non-transitory embodiments. The United States Patent and Trademark Office (USPTO)

is <u>required</u> to give claims their broadest reasonable interpretation consistent with the

specification during proceedings before the USPTO. *See In re Zletz*, 893 F.2d 319

(Fed. Cir. 1989) (during patent examination the pending claims must be interpreted as

broadly as their terms reasonably allow). The broadest reasonable interpretation of a

claim drawn to a computer readable media (also called machine readable medium and

other such variations) typically covers forms of non-transitory tangible media **and**

transitory propagating *signals per se* in view of the ordinary and customary meaning of

computer readable media. *See* MPEP 2111.01. When the broadest reasonable

interpretation of a claim covers *a signal per se,* the claim **must** be rejected under

35 U.S.C. § 101 as covering non-statutory subject matter. *See In re Nuijten*, 500 F.3d

1346, 1356-57 (Fed. Cir. 2007) (transitory embodiments are not directed to statutory

subject matter) and *Interim Examination Instructions for Evaluating Subject Matter*

Eligibility Under 35 U.S.C. § 101, Aug. 24, 2009; p. 2.

The Examiner suggests that the Applicant add the limitation "non-transitory" to

the storage media as recited in the claim(s) in order to properly render the claim(s) in

statutory form in view of their broadest reasonable interpretation in light of the originally

filed specification. The Examiner also suggests that the specification may be amended

to add the term "non-transitory storage media" to avoid a potential objection to the

specification for a lack of antecedent basis of the claimed terminology.

> Specification Page 5:
> Finally, the invention offers a computer program, **storable in memory**, that is associated with a
> processor and that includes instructions for the placement into operation of a process (such as
> that defined above) during execution of the program by the processor, as well as **storage media**
> on which the program is recorded.

Claim Rejections - 35 USC § 102

4.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless -

(e) the invention was described in (1) an application for patent, published under section 122(b), by another
filed in the United States before the invention by the applicant for patent or (2) a patent granted on an
application for patent by another filed in the United States before the invention by the applicant for patent,
except that an international application filed under the treaty defined in section 351(a) shall have the effects
for purposes of this subsection of an application filed in the United States only if the international
application designated the United States and was published under Article 21(2) of such treaty in the
English language.

5.   Claims **1 - 3, 5 - 13, 15 - 17** are rejected under 35 U.S.C. 102 (e) as being

anticipated by **Kavanaugh et al.** (US PGPUB No. **20030081607**).

Regarding Claim 1, Kavanaugh discloses a communication module comprised of

methods to exchange data flows with a communication network with the communication

session framework established (Kavanaugh para 013, ll 1-4: filtering data packets in

GPRS tunneling protocol signaling messages (data flows) between service nodes) and

organized per the communication session contexts (26, 27) and of security methods

(28, 29) for the control of exchanged data flows, which are characterized by the fact that

such security methods (28, 29) for the control of exchanged data flows are organized so

as to operate in connection with at least one parameter attached to the communication

session context (26, 27) of the corresponding session. (Kavanaugh para 013, ll 4-22:

analyzing GTP messages against a plurality of filtering criteria; analyzing messages

selected from GTP path management and tunneling management; para 014, ll 1-7:

filtering data packets in GTP signaling messages, analyzing selected messages; para

065, ll 1-15: checked to verify PDP (packets data protocol) context exists, if OK then

packet permitted to pass; additional checks are performed providing additional security

for PDP context messages)

Regarding Claim 2, Kavanaugh discloses per claim 1, a module in which the security

methods (28, 29) for the control of exchanged data flows are organized so as to operate

in connection with a communication session context key (26, 27) of the corresponding

session. (Kavanaugh para 013, ll 4-22: analyzing GTP messages against plurality of

filtering criteria (al least one constituent parameter); analyzing messages selected from

GTP path management and GTP tunnel management messages; based on information

in GTP header and accompanied information elements selected GTP packets are

dropped; para 065, ll 1-15: checked to verify PDP (packets data protocol) context exists)

Regarding Claim 3, Kavanaugh discloses per claim 1, a module in which the security

methods (28, 29) for the control of exchanged data flows are organized so as to operate

in connection with at least one constituent parameter of the communication session

context (26, 27) of the corresponding session. (Kavanaugh para 013, ll 4-22: analyzing

GTP messages against plurality of filtering criteria (al least one constituent parameter);

analyzing messages selected from GTP path management and GTP tunnel

management messages; para 065, ll 1-15: checked to verify PDP (packets data

protocol) context exists)

Regarding Claim 5, Kavanaugh discloses per claim 1, a module in which the methods

to exchange data flows include methods to exchange packet data flows, with the

security methods for the control of data flows being organized so as to operate on the

packet data. (Kavanaugh para 014, ll 1-7: filtering data packets in GTP signaling

messages and analyzing selected messages; para 065, ll 1-15: additional checks are

performed providing additional security for PDP context messages)

Regarding Claim 6, Kavanaugh discloses per claim 1, a module in which the security

methods (28, 29) for the control of exchanged data flows includes a filter (1, 2) that

operates by filtration on the data flows. (Kavanaugh para 013, II 4-9: analyzing GTP

messages against a plurality of filtering criteria)

Regarding Claim 7, Kavanaugh discloses per claim 1, a module in which the security

methods (28, 29) for the control of the exchanged data flows includes first and second

filters (1, 2), which operate by filtration on the exchanged data flows (Kavanaugh para

013, II 4-9: analyzing GTP messages against plurality of filtering criteria; selectively

dropping or allowing packets), and one or more gateways (3) for the control of the data

flows exchanged in connection with one or more criteria related to a data application

(Kavanaugh para 006, II 1-8: gateway to GPRS network; GGSN is a gateway that

communication with an external packet data network), in which at least one of the first

and second filters is a mechanism operating in connection with at least one parameter

attached to the communication session context of the corresponding session.

(Kavanaugh para 014, II 1-7: filtering data packets for GTP signaling messages

(communications session context) such as GTP path management and GTP tunnel

management messages)

Regarding Claim 8, Kavanaugh discloses a radiocommunication module, including a

communication module per part of claim 1. (Kavanaugh para 013, ll 1-4: filtering data in

General Packet Radio Service (GPRS); radio communications service utilized for data

packet transfer)

Regarding Claim 9, Kavanaugh discloses a mobile station (21) capable of data

exchange with a radiocommunication network (22, 23), including a radiocommunication

module per claim 8. (Kavanaugh para 013, ll 1-4: filtering data in General Packet Radio

Service (GPRS); radio communications service utilized for data packet transfer)

Regarding Claim 10, Kavanaugh discloses infrastructure equipment of a

radiocommunication network, including a communication module per part of claim 1.

(Kavanaugh para 013, ll 1-4: filtering data in General Packet Radio Service (GPRS);

radio communications service utilized for data packet transfer; para 005, ll 1-3: para

005, ll 9-13: a GPRS network; connects to the network through a Universal Terrestrial

Radio Access Network (UTRAN))

Regarding Claim 11, Kavanaugh discloses a process to carry out security control for

data flows exchanged between a communication module and a communication network

during the communication session organized per communication session contexts, in

which:

    a) a communication session is established with a remote correspondent, often an

       active communication session context; (Kavanaugh para 013, ll 1-4: filtering data

packets for messages between service nodes in a GPRS network; para 065, ll 1-15: checked to verify PDP (packets data protocol) context exists) and

b) one controls, within the established session, the data flows exchanged per the active communication session context, in connection with at least one parameter attached to such context. (Kavanaugh para 034, ll 1-10: GTP filter inspects all GTP packets (data flow) and performs specific filtering rules based on source and destination addresses, message types, and GTP version number (data flows processed based on at least one parameter); para 065, ll 1-15: checked to verify PDP (packets data protocol) context exists)

Regarding Claim 12, Kavanaugh discloses per claim 11, a process in which one controls the data flows exchanged per the active communication session context, in connection with a key of such active context. (Kavanaugh para 034, ll 1-10: GTP filters, controls what messages are permitted and denied; para 36, ll 1-7: path management protocol to check state of GSN nodes for which a packet data protocol (PDP) has been established)

Regarding Claim 13, Kavanaugh discloses per claim 11, a process in which one controls the flows of data exchanged per the active communication session context, in connection with at least one constituent parameter of such active context (26, 27). (Kavanaugh para 034, ll 1-10: GTP filter inspects all GTP packets (data flow) and performs specific filtering rules based on source and destination addresses, message

types, and GTP version number (at least one parameter); para 065, ll 1-15: checked to

verify PDP (packets data protocol) context exists)

Regarding Claim 15, Kavanaugh discloses per claim 11, a process in which one

controls the packet data flows exchanged per the active communication session

context, in connection with at least one parameter attached to the communication

session context of the corresponding session. (Kavanaugh para 034, ll 1-10: GTP filter

performs specific filtering rules (using at least one parameter) based on source and

destination addresses, message types, and GTP version number)

Regarding Claim 16, Kavanaugh discloses per claim 11, a process in which one

controls the data flows exchanged per the active communication session context by

filtering such data flows through at least one filter operating in connection with at least

one parameter attached to the communication session context of the corresponding

session. (Kavanaugh para 034, ll 1-10: GTP filter inspects all GTP packets (data flow)

and performs specific filtering rules based on source and destination addresses,

message types, and GTP version number)

Regarding Claim 17, Kavanaugh discloses per claim 11, a process in which one

controls the data flows exchanged per the active communication session context by

filtering such data flows through at least first and second filters, in order to filter the

exchanged data flows (Kavanaugh para 013, ll 4-22: analyzing messages against a

plurality of filtering criteria (first and second filters), and one or more gateways

controlling the data flows exchanged in connection with one or more criteria related to a

data application (Kavanaugh para 006, ll 1-8: gateway to GPRS network; GGSN is a

gateway that communication with an external packet data network), at least one of the

first and second filters being organized so as to operate in connection with at least one

parameter attached to the communication session context of the corresponding session.

(Kavanaugh para 013, ll 4-22: analyzing GTP messages against a plurality of filtering

criteria; analyzing messages selected from path management and tunneling

management; para 014, ll 1-7: filtering data packets in GTP signaling messages,

analyzing selected messages; para 065, ll 1-15: checked to verify PDP (packets data

protocol) context exists)

Claim Rejections - 35 USC § 103

6.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art
> are such that the subject matter as a whole would have been obvious at the time the invention was made
> to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be
> negatived by the manner in which the invention was made.

7.   Claims **4, 14, 18, 19** are rejected under 35 U.S.C. 103(a) as being unpatentable

over **Kavanaugh** in view of **Mohaban et al.** (US Patent No. **7,346,677**).

Regarding Claim 4, Kavanaugh discloses per claim 3, a module in which such

parameter is an address of the module or of equipment within which it is incorporated

(Kavanaugh para 034, ll 1-4: filtering rules based on source and destination addresses

(communications module or equipment address)) or the target network's key.

(Kavanaugh para 034, ll 1-10: GTP filters, controls what messages are permitted and

denied; para 36, ll 1-7: path management protocol to check state of GSN nodes for

which a packet data protocol (PDP) has been established)

Kavanaugh does not explicitly disclose a service quality associated with data flows

exchanged.

However, Mohaban discloses a service quality associated with the data flows

exchanged. (Kavanaugh para 034, ll 1-4: filtering rules based on source and destination

addresses (communications module or equipment address))

It would have been obvious to one of ordinary skill in the art to modify Kavanaugh

a service quality associated with data flows exchanged as taught by Mohaban.   One of

ordinary skill in the art would have been motivated to employ the teachings of Mohaban

for the benefits of the integration of applications into a policy based network system

whereby application developers participate in the decision making concerning how to

apply quality of service policies to a particular traffic flow. (Mohaban col 4, ll 52-56)

Regarding Claim 14, Kavanaugh discloses per claim 13, a process in which such

parameter is a module address. (Kavanaugh para 034, ll 1-10: inspects and performs

specific filtering rules based on source and destination addresses (module address)) or

the target network's key. (Kavanaugh para 034, ll 1-10: GTP filters, controls what

messages are permitted and denied; para 36, ll 1-7: path management protocol to

check state of GSN nodes for which a packet data protocol (PDP) has been established)

Kavanaugh does not explicitly disclose a service quality associated with the exchange of data flows.

However, Mohaban discloses a service quality associated with the exchange of data flows. (Mohaban col 5, ll 31-37: determine processing policies that associate traffic flows with quality of service)

Motivation for Mohaban to disclose a service quality associated with the exchange of data flows is as stated in Claim 4 above.

Regarding Claim 18, Kavanaugh discloses the placement into operation of a process, per part of claim 11. (Kavanaugh para 034, ll 1-10: inspects and performs specific filtering based on source and destination addresses, message types, and GTP version number (at least one parameter))

Kavanaugh does not explicitly disclose a computer program storable in memory.

However, Mohaban discloses a computer program, storable in memory, that is connected with a processor and that includes instructions for the placement into operation, during the execution of such program by the processor. (Mohaban para 006, ll 35-50: program comprises programmable processing elements, media for storage of program instructions)

Motivation for Mohaban to disclose a computer program storable in memory is as stated in Claim 4 above.

Regarding Claim 19, Kavanaugh discloses the process of Claim 18.

Kavanaugh does not explicitly disclose a storage media.

However, Mohaban discloses storage media on which the program is recorded.

(Kavanaugh para 006, ll 35-50: computer readable media to store program)

Motivation for Mohaban to disclose a storage media is as stated in Claim 4 above

Conclusion

Any inquiry concerning this communication or earlier communications from the
examiner should be directed to Kyung Hye Shin whose telephone number is (571) 272-
3920. The examiner can normally be reached on 9:30 am - 6 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's
supervisor, Tonia L. Dollinger can be reached on (571) 272-4170. The fax phone
number for the organization where this application or proceeding is assigned is 571-
273-8300.

Information regarding the status of an application may be obtained from the
Patent Application Information Retrieval (PAIR) system. Status information for
published applications may be obtained from either Private PAIR or Public PAIR.
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you have questions on access to the Private PAIR system, contact the Electronic
Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

April 26, 2010   /Kyung Hye Shin/
                                                        Examiner, Art Unit 2443